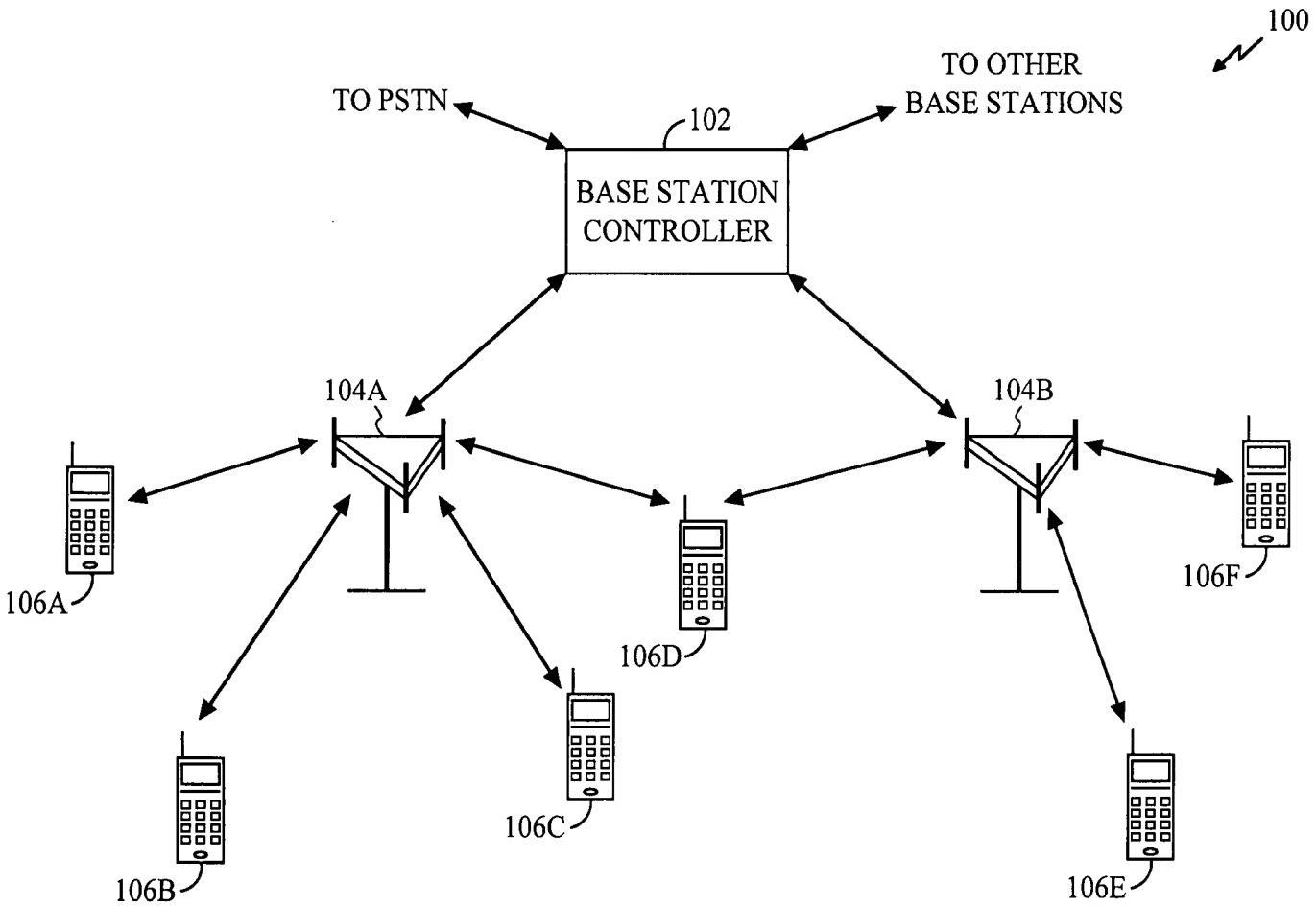
100
TO PSTN
TO OTHER
BASE STATIONS
102
BASE STATION
CONTROLLER
104A
104B
106A
106B
106C
106D
106E
106F

FIG. 1

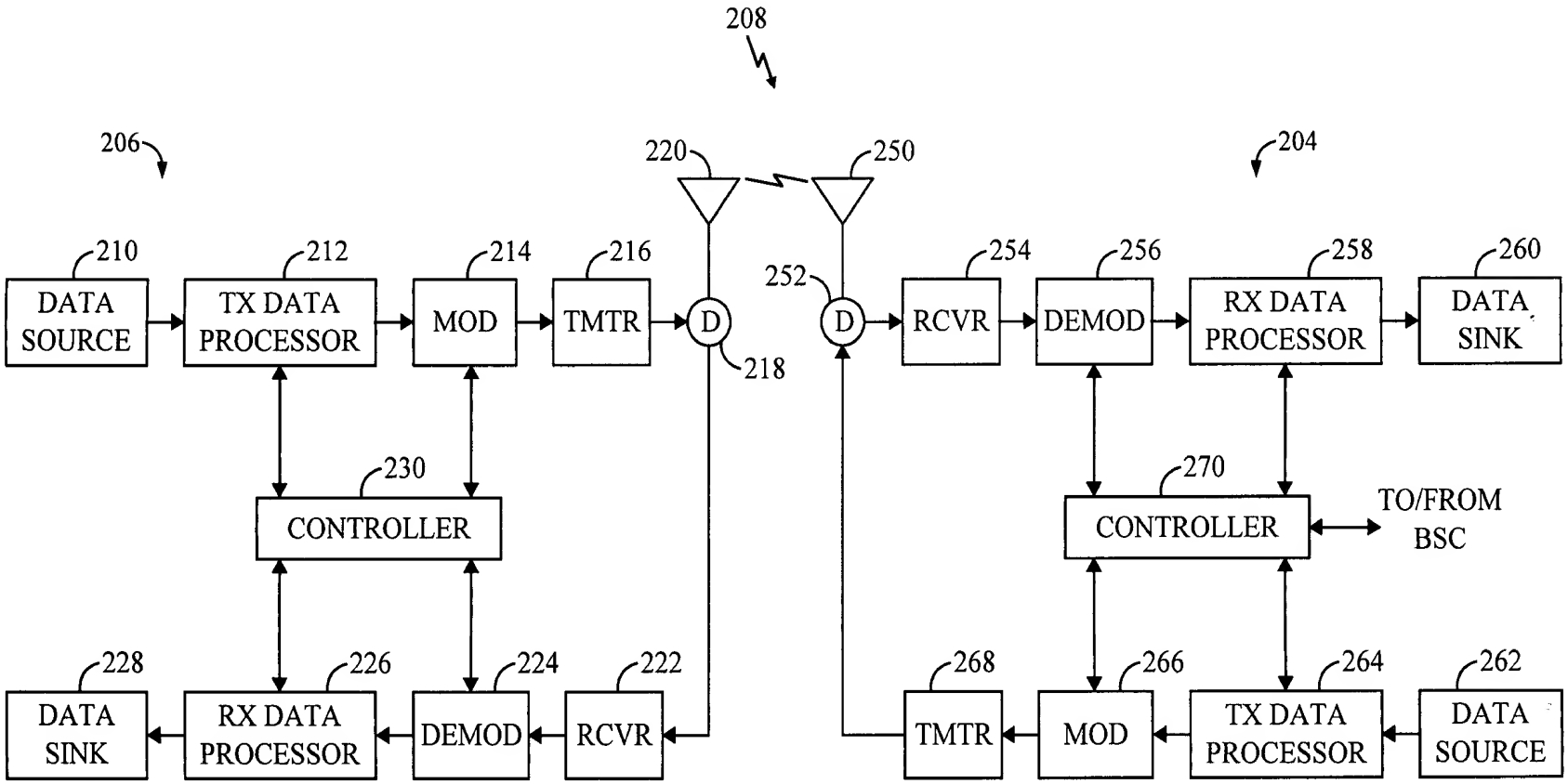
208
206
204
220
250
210
212
214
216
252
254
256
258
260
DATA SOURCE
TX DATA PROCESSOR
MOD
TMTR
D
218
D
RCVR
DEMOD
RX DATA PROCESSOR
DATA SINK
230
270
CONTROLLER
CONTROLLER
TO/FROM BSC
228
226
224
222
268
266
264
262
DATA SINK
RX DATA PROCESSOR
DEMOD
RCVR
TMTR
MOD
TX DATA PROCESSOR
DATA SOURCE

FIG. 2

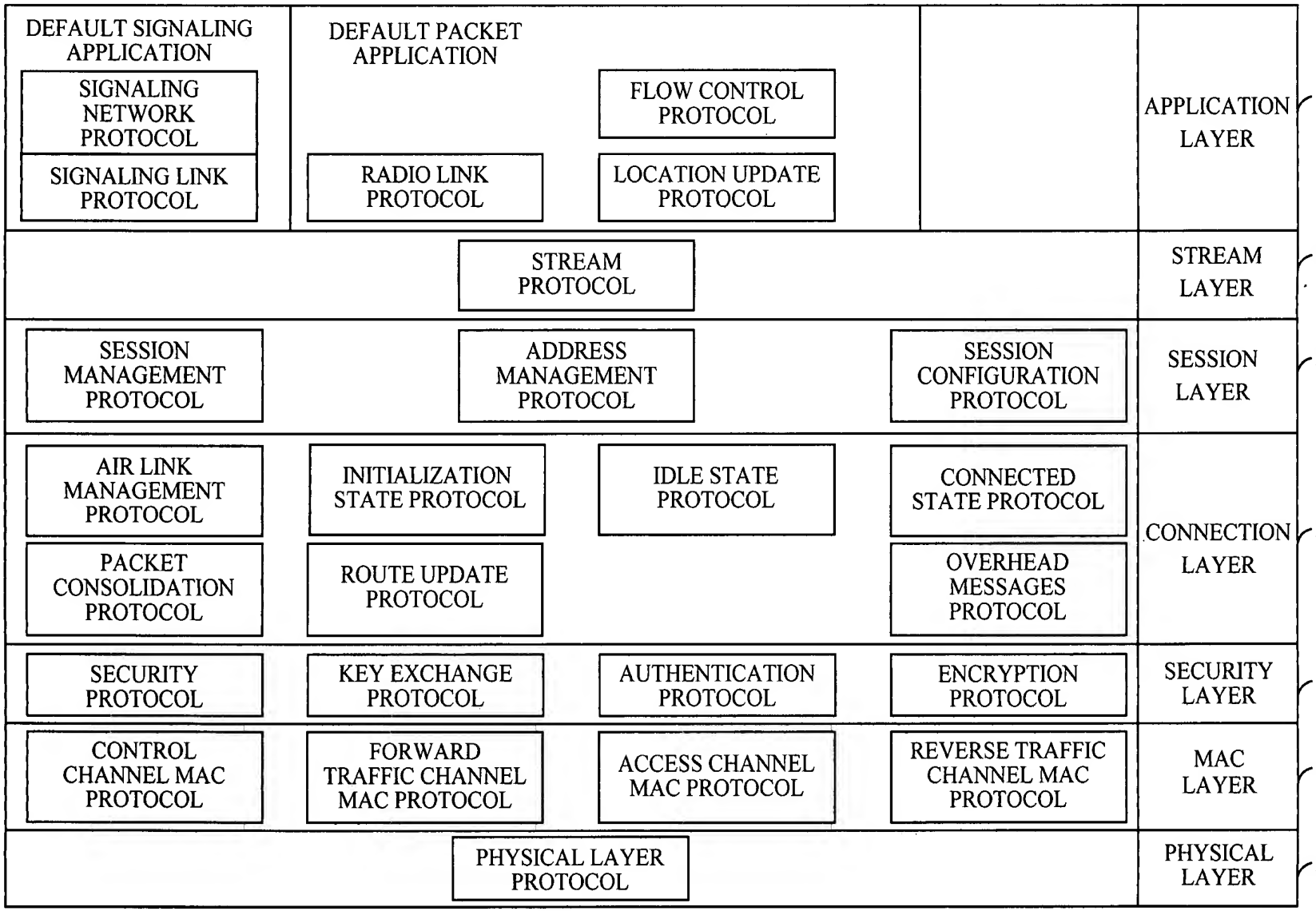
DEFAULT SIGNALING APPLICATION
SIGNALING NETWORK PROTOCOL
SIGNALING LINK PROTOCOL
DEFAULT PACKET APPLICATION
FLOW CONTROL PROTOCOL
RADIO LINK PROTOCOL
LOCATION UPDATE PROTOCOL
APPLICATION LAYER
302
STREAM PROTOCOL
STREAM LAYER
304
SESSION MANAGEMENT PROTOCOL
ADDRESS MANAGEMENT PROTOCOL
SESSION CONFIGURATION PROTOCOL
SESSION LAYER
306
AIR LINK MANAGEMENT PROTOCOL
INITIALIZATION STATE PROTOCOL
IDLE STATE PROTOCOL
CONNECTED STATE PROTOCOL
PACKET CONSOLIDATION PROTOCOL
ROUTE UPDATE PROTOCOL
OVERHEAD MESSAGES PROTOCOL
CONNECTION LAYER
308
SECURITY PROTOCOL
KEY EXCHANGE PROTOCOL
AUTHENTICATION PROTOCOL
ENCRYPTION PROTOCOL
SECURITY LAYER
310
CONTROL CHANNEL MAC PROTOCOL
FORWARD TRAFFIC CHANNEL MAC PROTOCOL
ACCESS CHANNEL MAC PROTOCOL
REVERSE TRAFFIC CHANNEL MAC PROTOCOL
MAC LAYER
312
PHYSICAL LAYER PROTOCOL
PHYSICAL LAYER
314

FIG. 3

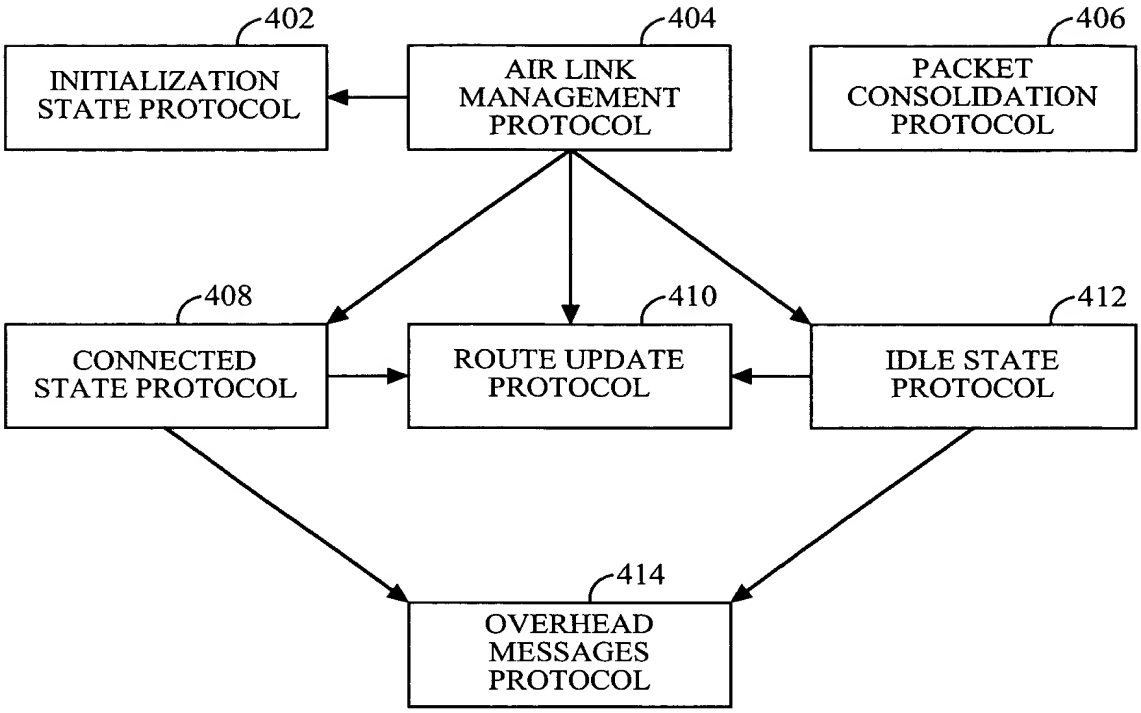
402
INITIALIZATION STATE PROTOCOL
404
AIR LINK MANAGEMENT PROTOCOL
406
PACKET CONSOLIDATION PROTOCOL
408
CONNECTED STATE PROTOCOL
410
ROUTE UPDATE PROTOCOL
412
IDLE STATE PROTOCOL
414
OVERHEAD MESSAGES PROTOCOL

FIG. 4

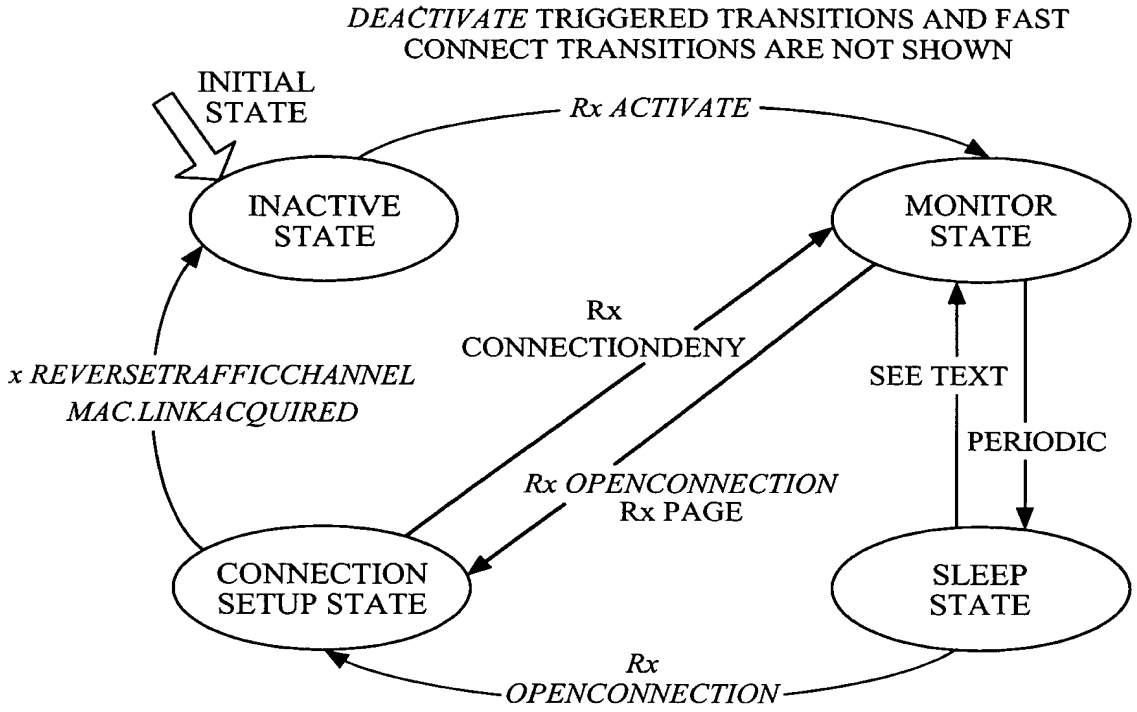
DEACTIVATE TRIGGERED TRANSITIONS AND FAST CONNECT TRANSITIONS ARE NOT SHOWN
INITIAL STATE
Rx ACTIVATE
INACTIVE STATE
MONITOR STATE
Rx CONNECTIONDENY
x REVERSETRAFFICCHANNEL MAC.LINKACQUIRED
SEE TEXT
PERIODIC
Rx OPENCONNECTION Rx PAGE
CONNECTION SETUP STATE
SLEEP STATE
Rx OPENCONNECTION

FIG. 5

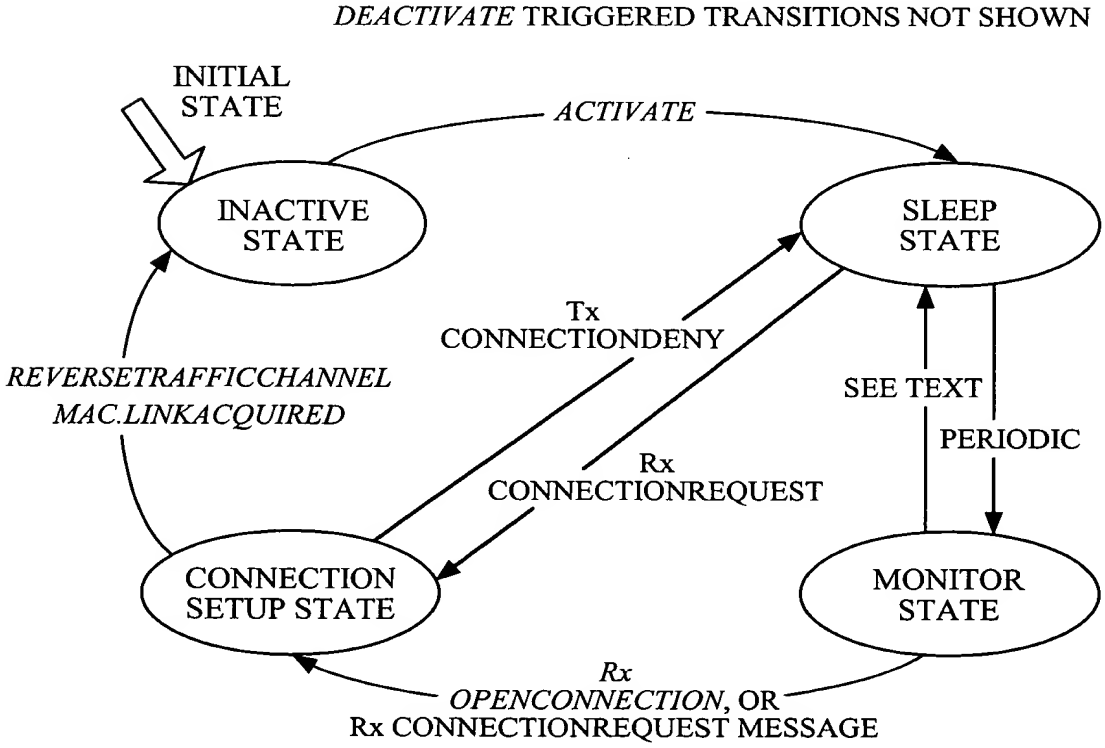
DEACTIVATE TRIGGERED TRANSITIONS NOT SHOWN
INITIAL STATE
ACTIVATE
INACTIVE STATE
SLEEP STATE
Tx CONNECTIONDENY
REVERSETRAFFICCHANNEL MAC.LINKACQUIRED
SEE TEXT
PERIODIC
Rx CONNECTIONREQUEST
CONNECTION SETUP STATE
MONITOR STATE
Rx OPENCONNECTION, OR Rx CONNECTIONREQUEST MESSAGE

FIG. 6

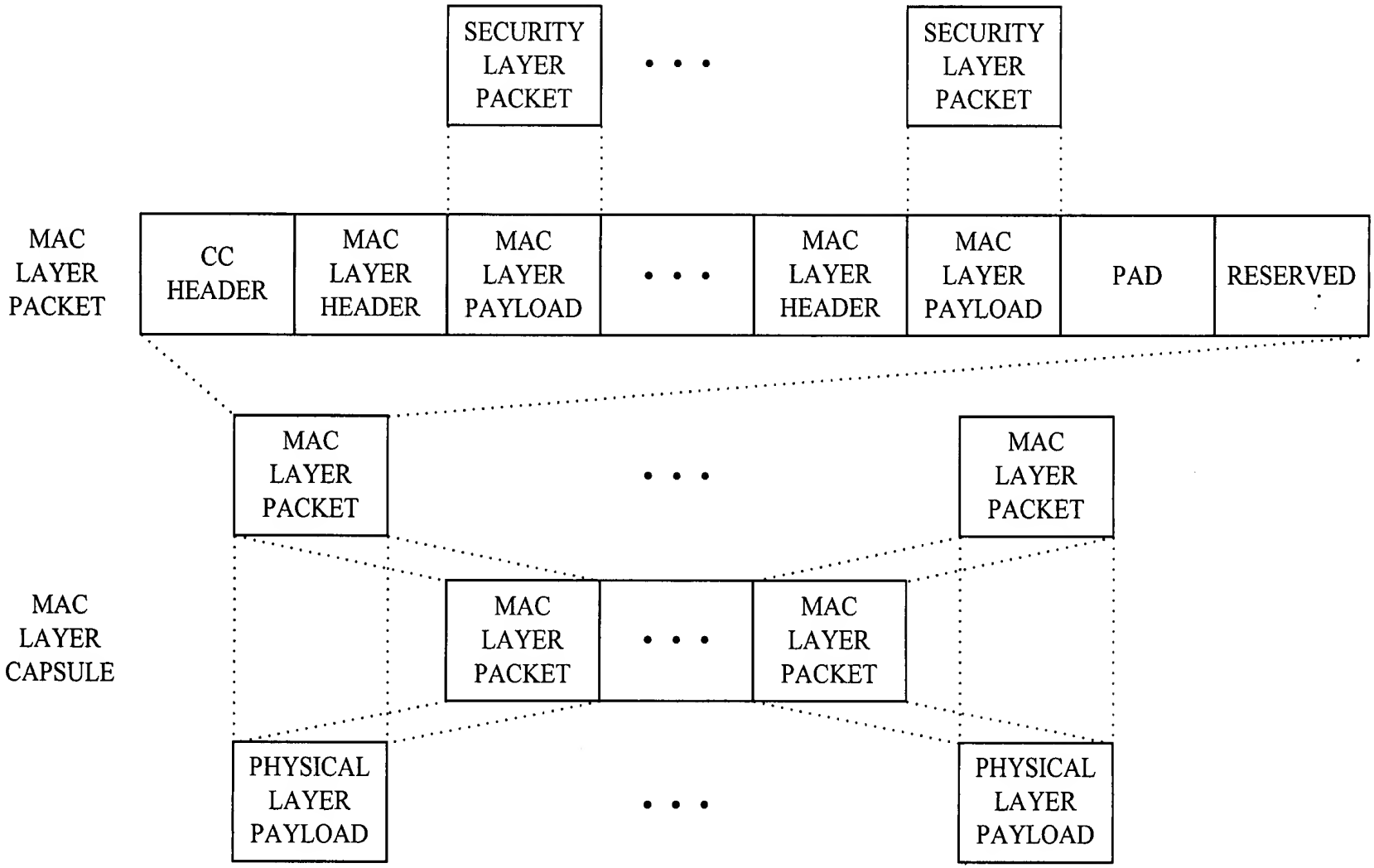
SECURITY LAYER PACKET
SECURITY LAYER PACKET
MAC LAYER PACKET
CC HEADER
MAC LAYER HEADER
MAC LAYER PAYLOAD
MAC LAYER HEADER
MAC LAYER PAYLOAD
PAD
RESERVED
MAC LAYER PACKET
MAC LAYER PACKET
MAC LAYER CAPSULE
MAC LAYER PACKET
MAC LAYER PACKET
PHYSICAL LAYER PAYLOAD
PHYSICAL LAYER PAYLOAD

FIG. 7

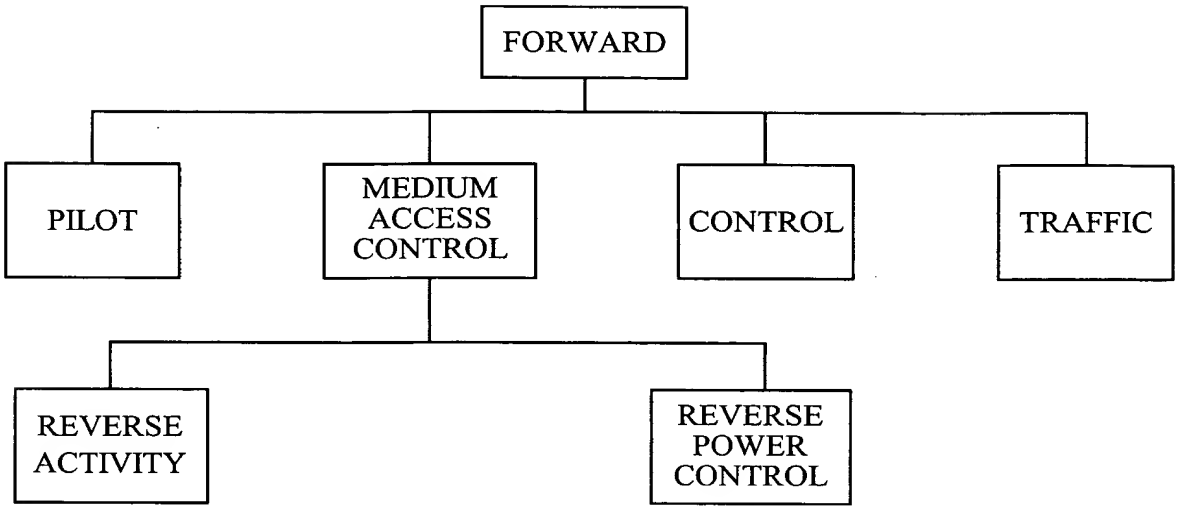
FORWARD
PILOT
MEDIUM ACCESS CONTROL
CONTROL
TRAFFIC
REVERSE ACTIVITY
REVERSE POWER CONTROL

FIG. 8

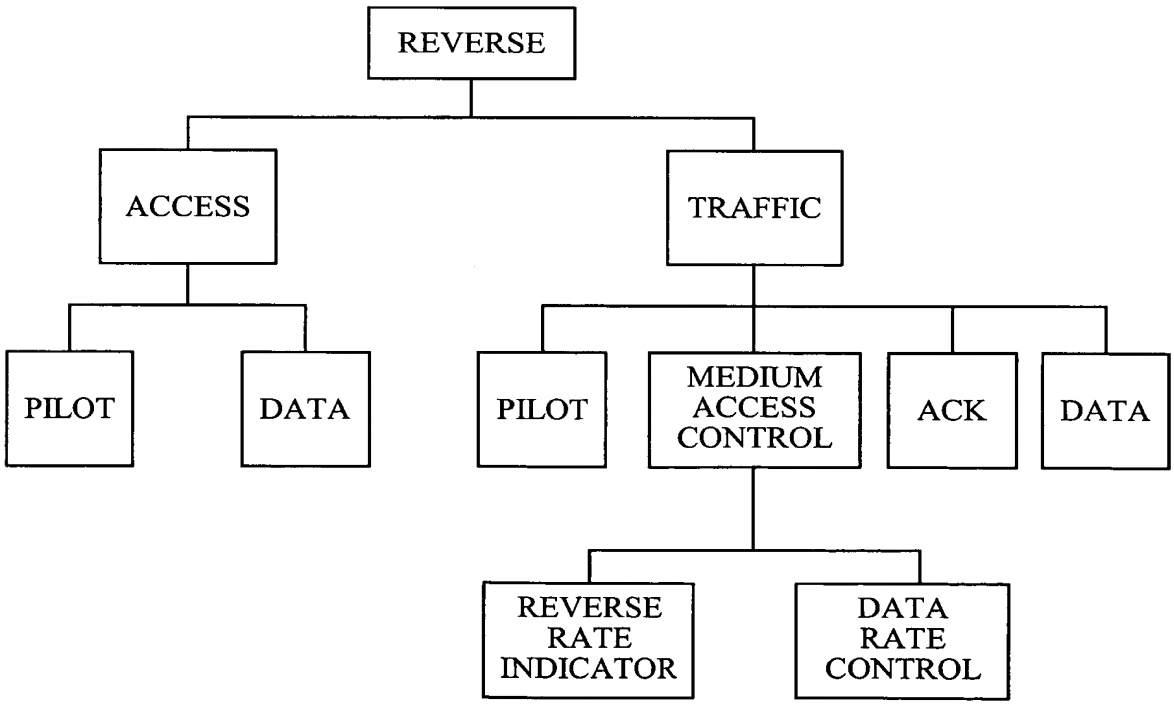
REVERSE
ACCESS
TRAFFIC
PILOT
DATA
PILOT
MEDIUM ACCESS CONTROL
ACK
DATA
REVERSE RATE INDICATOR
DATA RATE CONTROL

FIG. 9

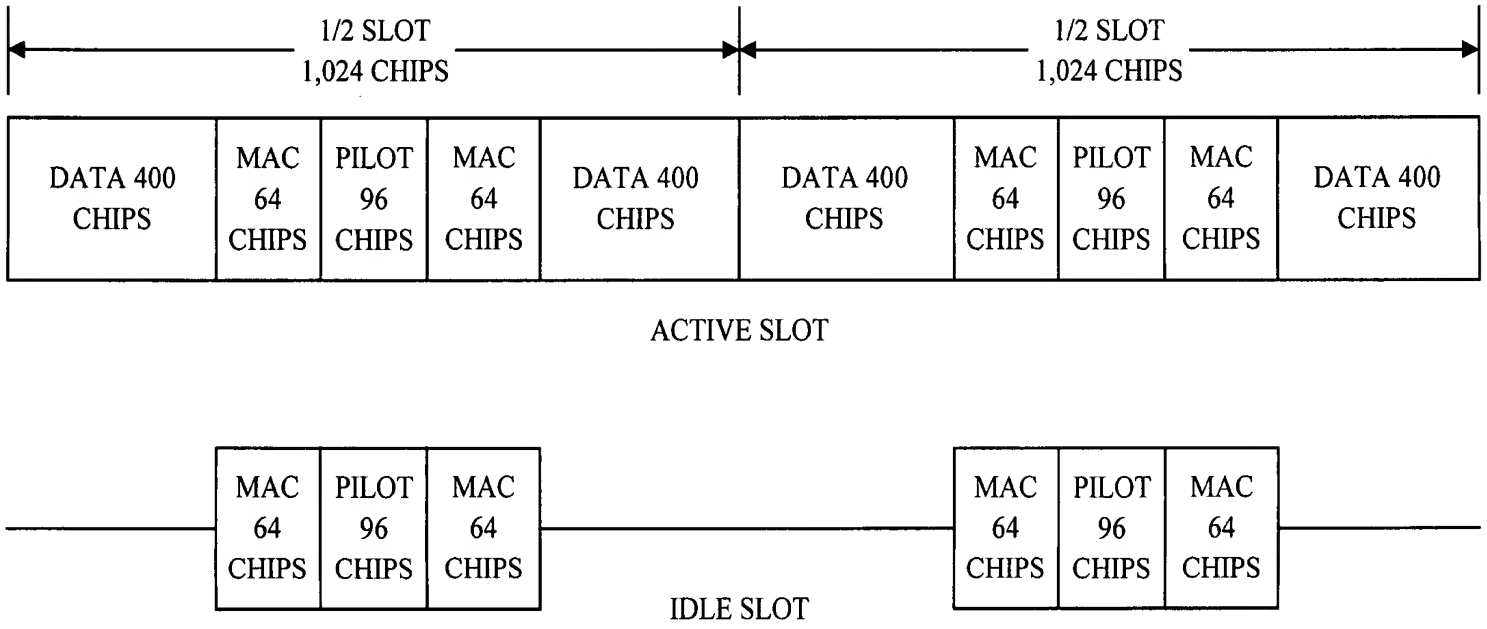
1/2 SLOT
1,024 CHIPS
1/2 SLOT
1,024 CHIPS
DATA 400 CHIPS
MAC 64 CHIPS
PILOT 96 CHIPS
MAC 64 CHIPS
DATA 400 CHIPS
DATA 400 CHIPS
MAC 64 CHIPS
PILOT 96 CHIPS
MAC 64 CHIPS
DATA 400 CHIPS
ACTIVE SLOT
MAC 64 CHIPS
PILOT 96 CHIPS
MAC 64 CHIPS
MAC 64 CHIPS
PILOT 96 CHIPS
MAC 64 CHIPS
IDLE SLOT

FIG. 10

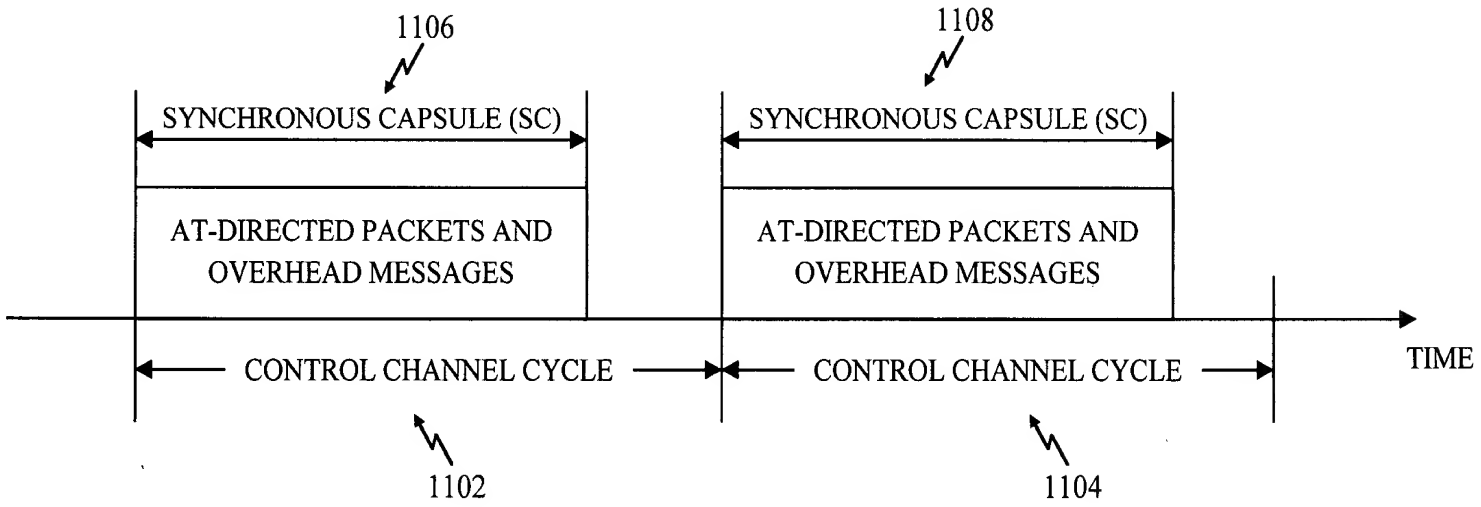
1106
1108
SYNCHRONOUS CAPSULE (SC)
SYNCHRONOUS CAPSULE (SC)
AT-DIRECTED PACKETS AND OVERHEAD MESSAGES
AT-DIRECTED PACKETS AND OVERHEAD MESSAGES
TIME
CONTROL CHANNEL CYCLE
CONTROL CHANNEL CYCLE
1102
1104

FIG. 11

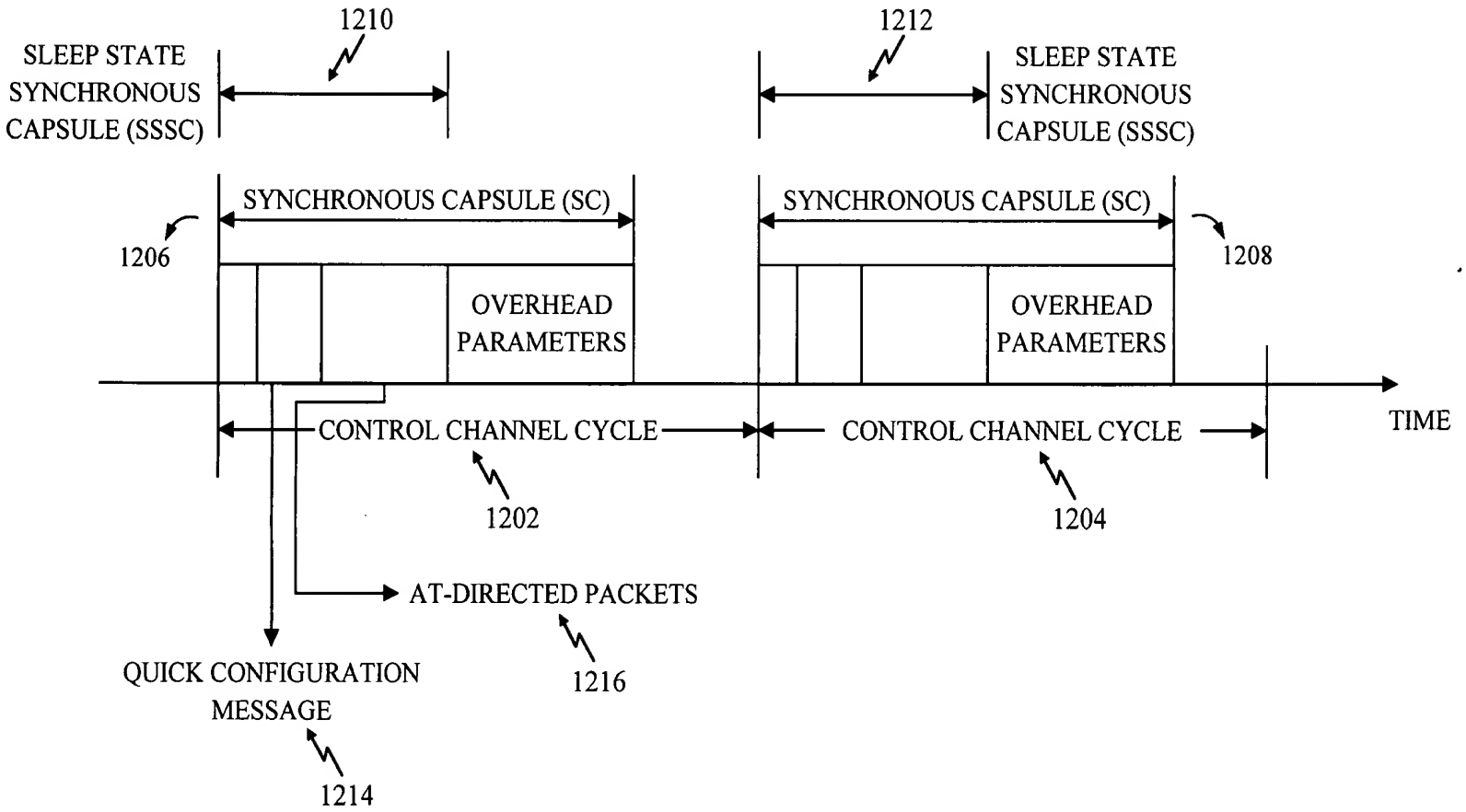
1210
SLEEP STATE SYNCHRONOUS CAPSULE (SSSC)
1212
SLEEP STATE SYNCHRONOUS CAPSULE (SSSC)
SYNCHRONOUS CAPSULE (SC)
SYNCHRONOUS CAPSULE (SC)
1206
1208
OVERHEAD PARAMETERS
OVERHEAD PARAMETERS
TIME
CONTROL CHANNEL CYCLE
CONTROL CHANNEL CYCLE
1202
1204
AT-DIRECTED PACKETS
1216
QUICK CONFIGURATION MESSAGE
1214

FIG. 12

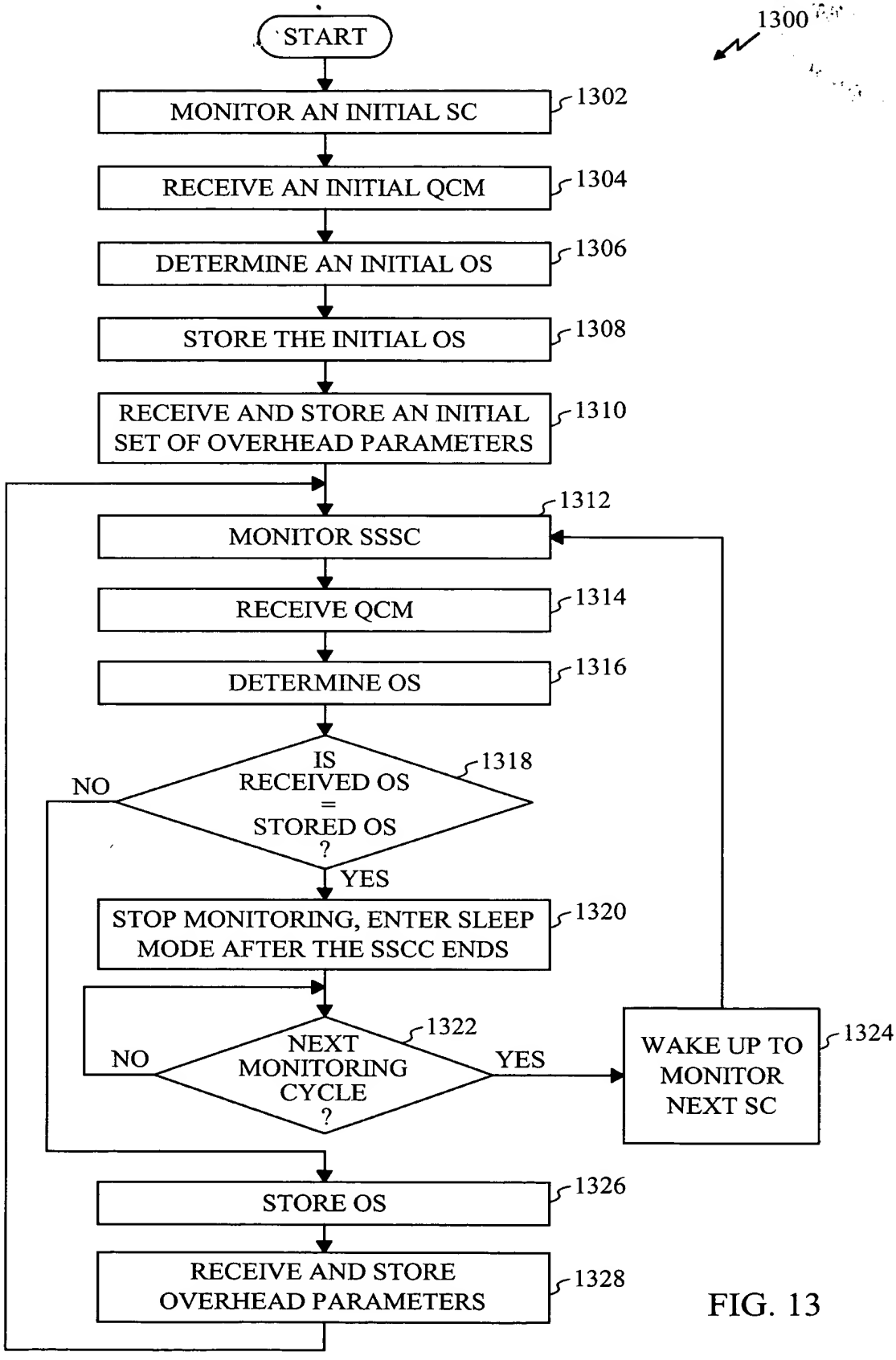
1300
START
MONITOR AN INITIAL SC
1302
RECEIVE AN INITIAL QCM
1304
DETERMINE AN INITIAL OS
1306
STORE THE INITIAL OS
1308
RECEIVE AND STORE AN INITIAL SET OF OVERHEAD PARAMETERS
1310
1312
MONITOR SSSC
RECEIVE QCM
1314
DETERMINE OS
1316
IS RECEIVED OS = STORED OS ?
1318
NO
YES
STOP MONITORING, ENTER SLEEP MODE AFTER THE SSCC ENDS
1320
NEXT MONITORING CYCLE ?
1322
NO
YES
WAKE UP TO MONITOR NEXT SC
1324
STORE OS
1326
RECEIVE AND STORE OVERHEAD PARAMETERS
1328

FIG. 13